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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/645,404	08/25/2000	Atsuhiro Imaizumi	ASA-915	4522

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ALEXANDRIA, VA 22314

EXAMINER

CHANG, JON CARLTON

ART UNIT

PAPER NUMBER

2623

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6

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/645,404	IMAZUMI ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Jon Chang	2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,5,12-15,28-32 and 34-36 is/are rejected.
- 7) Claim(s) 2-4,6-11,16-27 and 33 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 August 2000 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ .                                   |

***Claim Objections***

1. Claims 16 and 31 are objected to because of the following informalities:
  - a) In claim 16, at line 4, "the extracted further keyword" is not clear. Specifically, the use of the word "further" is not understood.
  - b) Claim 31 has a period after the word "register" in the next to last line of the claim. This should be removed.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 5, 12-15 and 28-31 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,263,121 to Melen et al. (hereinafter "Melen").

As to claim 1, Melen discloses a form sheet type determining method comprising the steps of:

extracting each character string on an input form sheet as a keyword, after performing character recognition on the each character string (column 3, lines 6-9;

column 3, lines 13-22); and

collating the extracted keywords with a plurality of sets of keywords registered beforehand for each predetermined form sheet as one set of keywords in a keyword register, thereby to determine the type of said input form sheet (column 4, lines 49-50; column 6, lines 24-27; column 7, lines 65-67; column 8, lines 6-9).

With regard to claim 5, Melen discloses a form sheet type determining method for determining to which of predetermined form sheet types an input form sheet corresponds, comprising the steps of:

registering a plurality of sets of keywords beforehand in a keyword register with one set of keywords for each of predetermined form sheet types (column 4, lines 31-32; column 4, lines 40-41; column 4, lines 49-50);

reading image data of an input form sheet, extracting character strings from the read image data, and performing character recognition on each of the extracted character strings (column 3, lines 1-9);

extracting each of said character-recognized character strings as a keyword (column 4, lines 13-22);

collating said extracted keywords, for each of the form sheet types, with said plurality of sets of keywords registered in said register, there by to determine the type of said input form sheet (column 4, lines 49-50; column 6, lines 24-27; column 7, lines 65-67; column 8, lines 6-9).

Referring to claim 13, Melen discloses a form sheet type determining method for

determining to which of predetermined form sheet types an input form sheet corresponds, comprising the steps of:

registering a plurality of sets of keywords beforehand in a keyword register with one set of keywords for each of predetermined form sheet types (column 4, lines 31-32; column 4, lines 40-41; column 4, lines 49-50);

reading image data of an input form sheet, extracting character strings from the read image data, and performing character recognition on each of the extracted character strings (column 3, lines 1-9);

collating said character-recognized character strings with reference character string patterns stored in a data base beforehand, and extracting as a keyword each of the character strings which coincide at least partly with an arbitrary one of the reference character patterns (column 4, lines 49-50; column 6, lines 24-27; column 7, lines 65-67; column 8, lines 6-9);

collating said extracted keywords, for each of the form sheet types, with said sets of keywords registered in said register, thereby to determine the type of said input form sheet (column 4, lines 49-50; column 6, lines 24-27; column 7, lines 65-67; column 8, lines 6-9).

Regarding claim 15, the remarks provided above for claim 5 are applicable in view of the apparatus shown in Melen's Fig.1.

As to claim 29 Melen further discloses that said register includes files provided one for each form sheet type, each file registering therein a set of keywords for determining a specific form sheet (e.g., note that each document map is in an image

file, column 5, lines 66-67)

Regarding claim 30, the remarks provided above for claim 13 are applicable, in view of the apparatus of Melen's Fig. 1.

Claims 12, 14, 28 and 31, essentially require the registering of a combination of two keywords. This is taught by Melen. Note Melen utilizes phrases (column 4, line 50). Phrases are combinations of at least two words.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 32 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melen.

Regarding claims 32 and 35, the remarks provide above for claims 5 and 13 are applicable. Melen does not disclose the use of a computer, and therefore does not disclose the computer program product. However, the Examiner takes Official Notice that it is exceedingly well known in the art to implement archiving and retrieval of documents in computer-based systems. Given the widespread use of computers, their efficiency at retrieving information, their low cost, and the flexibility they provide, it would have been obvious to one of ordinary skill in the art to implement Melen's system in a computer. Such a computer would inherently utilize a computer program product.

Regarding claims 34 and 36, see the remarks provided above for claims 12, 14, 28 and 31.

#### ***Allowable Subject Matter***

7. Claims 2-4, 6-11, 16-27 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***References Cited***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 4,985,863 to Fujisawa et al. teaches a document storage and retrieval system which stores character code strings for retrieval with reference to text information in documents.

U.S. Patent 5,235,653 to Nakano et al. teaches a document analysis system which recognizes characters in a document, recognizes a structure of a document, so as to identify a document.

U.S. Patent 5,821,929 to Shimizu et al. teaches an image processing method and apparatus used for identifying documents. The patent describes extracting and recognizing keywords, and registering them, for use in identifying documents, but does not provide details on how the identifying is performed.

U.S. Patent 6,363,179 to Evans et al. teaches recognizing characters in document images, and displaying a matching document in response to a query.

"DRS: A Workstation-Based Document Recognition System for Text Entry" by Amano et al. teaches a document analysis system that uses OCR.

"Robust Recognition of Documents" by Kreich teaches knowledge of geometry and text to recognized documents.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Chang whose telephone number is (703)305-8439. The examiner can normally be reached on M-F 8:00 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Art Unit: 2623

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

  
Jon Chang  
Primary Examiner  
Art Unit 2623

Jon Chang  
June 28, 2003